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VALTSITUD RATTAD

Railway applications - Wheelsets and bogies - Monobloc
Wheels - Technical approval procedure - Part 1: Forged
and rolled wheels

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13979-1:2020 sisaldab Euroopa standardi EN 13979-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 13979-1:2020 consists of the English text of the European standard EN 13979-1:2020.
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Geschmiedete und gewalzte Räder

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Contents	Page
European foreword.....	5
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Parameters for the definition of the application covered.....	8
4.1 General.....	8
4.2 Geometric parameters for interchangeability	8
4.2.1 General.....	8
4.2.2 Functional requirements.....	8
4.2.3 Assembly requirements.....	9
4.2.4 Maintenance requirements	9
4.3 Parameters for thermomechanical assessment of tread-braked wheels.....	9
4.3.1 Drag braking or consecutive stop braking.....	9
4.3.2 Accidental drag braking incident.....	10
4.4 Mechanical assessment parameters	10
4.5 Acoustic assessment parameters	11
5 Description of the wheel, the design of which shall be assessed	11
6 Assessment of geometric interchangeability	11
7 Assessment of thermomechanical behaviour	11
7.1 General procedure	11
7.2 First stage – Braking bench test.....	12
7.2.1 Test procedure	12
7.2.2 Decision criteria	12
7.3 Second stage – Wheel fracture bench test.....	13
7.3.1 General.....	13
7.3.2 Test procedure	13
7.3.3 Decision criterion	13
7.4 Third stage – Field braking test	13
7.4.1 General.....	13
7.4.2 Test procedure	13
7.4.3 Decision criteria	13
8 Assessment of mechanical behaviour.....	14
8.1 General procedure	14
8.2 First stage – Calculation	14
8.2.1 Applied forces.....	14
8.2.2 Calculation procedure	16
8.2.3 Decision criteria	16
8.3 Second stage – Bench test.....	17
8.3.1 General.....	17
8.3.2 Definition of bench loading and the test procedure.....	17
8.3.3 Decision criteria	17
9 Assessment of acoustic behaviour	17

10	Technical approval documents	17
	Annexe A (informative) Drag braking values	18
A.1	Freight wagons	18
A.2	Other types of rolling stock and specific freight wagons	18
	Annexe B (normative) Assessment of thermomechanical behaviour	19
B.1	Assessment flow chart	19
B.2	Braking bench test procedure	20
B.2.1	Test principle	20
B.2.2	Definition of drag braking	20
B.2.3	Method for measuring decision criteria	20
B.2.4	Tests and measurements	21
B.2.5	Anomalies	22
B.3	Wheel fracture bench testing procedure	22
B.3.1	Test principle	22
B.3.2	Creation of residual stresses in the rim of the wheel	22
B.3.3	Pre-cracked rim	22
B.3.4	Definition of drag braking test	24
B.3.5	Parameters for the wheel fracture bench test	24
B.3.6	Tests and measurements	25
B.3.7	Anomalies	26
B.4	Field braking test procedure	26
B.4.1	Test principle	26
B.4.2	Definition of braking	26
B.4.3	Method for measuring decision criteria	27
B.4.4	Route type for testing	27
B.4.5	Tests and measurements	28
B.4.6	Anomalies	29
	Annexe C (normative) Wheel profile diameter definition	30
C.1	General	30
C.2	Diameter after last reprofiling	30
C.3	Worn diameter	31
	Annexe D (normative) Assessment of mechanical behaviour	32
D.1	Assessment flow chart	32
D.2	Calculation procedure in the case of exceptional load	33
D.2.1	Principle	33
D.2.2	Load	33
D.3	Calculation procedure for cases of fatigue load	33
D.3.1	Principle	33
D.3.2	Load	33
D.3.3	Method of calculation	33
	Annexe E (informative) Fatigue loading for narrow gauge tracks (metric or close to a metre)	35
	Annexe F (informative) Fatigue loading for tilting trains	36
	Annexe G (normative) Mechanical behaviour – Finite element calculation assessment	37
	Annexe H (informative) Mechanical behaviour – Bench loading and test procedure	38
H.1	Principle of bench loading and test procedure	38
H.2	Definition of loads	38
H.2.1	General	38
H.2.2	Measurement of stresses during field tests	38
H.3	Fatigue bench test	39

H.3.1	Method 1 – Random fatigue test	39
H.3.2	Method 2 – Single-stage fatigue test	40
H.3.3	Examples of benches	41
Annexe I (informative)	Assessment of acoustic behaviour	42
I.1	General procedure	42
I.2	Assessment procedure	42
I.3	Assessment criteria	43
I.4	Decision criterion	43
I.5	Assessment flow chart	44
I.5.1	Preliminary comment	44
I.5.2	Calculating the wheel modal basis	45
I.5.3	Defining the reference speeds	45
I.5.4	Defining the reference combined wheel-rail roughness	45
I.5.5	Defining the reference track model	46
I.5.6	Defining the calculation parameters	47
I.5.7	Calculating sound power	48
I.5.8	Factoring the weighted spectrum into sound power	48
I.5.9	Calculating the acceptance criterion	49
I.5.10	Optional calculations	49
I.6	Field measurement procedure	50
I.6.1	General	50
I.6.2	Environmental conditions	50
I.6.3	Conditions for the track	50
I.6.4	Conditions for the train	50
I.6.5	Positioning the measurement points	51
I.6.6	Measurement quantities	52
I.6.7	Test procedure	52
I.6.8	Data processing	53
Annexe J (informative)	Ultrasonic method for determining residual stresses in the rim (non-destructive method)	55
J.1	Procedure	55
J.2	Measurement uncertainty	55
J.3	Calibrations	56
J.4	Verifying measurement parameters	56
Annexe ZA (informative)	Relationship between this European Standard and the relevant essential requirements of EU Directive 2008/57/EC which it aims to cover	57
Bibliography	61

European foreword

This document (EN 13979-1:2020) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, by January 2021 at the latest, and all conflicting national standards shall be withdrawn no later than January 2021.

Attention is drawn to the fact that some elements of this document may be the subject of patent rights or similar rights. CEN and/or CENELEC shall not be held responsible for identifying all or some of these patent rights.

This document replaces EN 13979-1:2003+A2:2011.

This document has been prepared in the context of a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

For the relationship with Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are required to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, the Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, the Republic of Serbia, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

An assessment of the two following aspects is carried out before a wheel is commissioned:

- assessment of the design as described in this standard;
- assessment of the quality of the product (EN 13262).

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1 Scope

The aim of this document is to define a design assessment procedure of a forged and rolled monobloc wheel (RST). This assessment is carried out before the wheel is commissioned. This document describes, in particular, the assessment to be performed in order to use wheels on a European network which, in addition, have quality requirements in conformity with those defined in EN 13262.

This assessment requires that the conditions of use for the wheel are defined and this standard provides a method for defining those conditions.

The assessment of the design covers four aspects:

- a geometrical aspect: to allow interchangeability of different solutions for the same application;
- a thermomechanical aspect: to manage wheel deformations and to ensure that braking will not cause wheels to fracture;
- a mechanical aspect: to ensure that no fatigue cracks occur in the wheel web and that no permanent deformation occurs under exceptional loading;
- an acoustic aspect: to ensure that the solution chosen is as good as the reference wheel.

This document does not cover assessment of the hub or of the rim.

This document has been drawn up for wheels of non-powered tread-braked wheelsets and applies in full to this type of wheel. For wheels on which disc brakes are mounted or toothed transmission wheels or even wheels with noise reduction devices, the requirements may be amended or supplemented.

For urban railway vehicles, other standards or documents may be used.

2 Normative references

The following documents referred to in the text constitute, for all or part of their content, requirements of this document. For dated references, only the cited edition applies. For undated references, the last edition of the reference document applies (including any amendments).

EN 13103-1, *Railway applications — Wheelsets and bogies — Part 1: Design method for axles with external journals*

EN 13262:2004+A2:2011, *Railway applications – Wheelsets and bogies – Wheels – Product requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: <http://www.electropedia.org/>
- ISO Online browsing platform: <http://www.iso.org/obp>